



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER OF PATENTS AND TRADEMARKS
Washington, D.C. 20231
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

09/742,879

12/20/2000

Tara L. Cobble

00-104

7501

719

7590

06/11/2002

CATERPILLAR INC.
100 N.E. ADAMS STREET
PATENT DEPT.
PEORIA, IL 616296490

EXAMINER

STAMPF, TIMOTHY R

ART UNIT

PAPER NUMBER

2857

DATE MAILED: 06/11/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/742,879

Applicant(s)

COBBLE ET AL.

Examiner

Timothy R. Stampf

Art Unit

2857

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 December 2000.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-45 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-45 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- ☐ Interview Summary (PTO-413) Paper No(s). _____
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other:

DETAILED ACTION

Specification

1. The disclosure is objected to because of the following informalities.
 - (a) Page 6, line 1, information should be provided in place of the blank line preceding -- (EPE) --.
 - (b) The last word of the Title of the invention should be -- Machine --.
Appropriate correction is required.

Claim Objections

2. Claims 17, 23, 35 and 38 are objected to because of the following informalities.
 - (a) Claim 17, line 4; the parenthetical expression -- (128) -- should be deleted.
 - (b) Claim 23, line 3; the phrase -- from the user), -- should be changed to -- from the user, --.
 - (c) Claims 35 and 38 should refer to claims 34 and 22, respectively, as the parent claims.
Appropriate correction is required.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1-4, 15-17 and 45 are rejected under 35 U.S.C. 102(b) as being anticipated by Molloy (U.S. Patent No. 5,787,234).

Molloy discloses receiving a description of an initial problem related to a work machine (i.e., a computer, which is defined as a work machine in the instant specification on page 5, lines 11-15) from a user (Fig. 15, col. 13, lines 46-47), displaying at least one question as a function of the initial problem (i.e., "problem concepts"; Fig. 16, col. 13, lines 54-59), displaying a first set of recommended actions as a function of the initial problem (i.e., multiple "ACTION" entries in Fig. 16), receiving and displaying an answer from the user to at least one question (Fig. 17, col. 13, lines 60-64), and displaying a second set of recommended actions as a function of the initial problem and the answer to at least one question that is a subset of the first set of recommended actions (i.e., multiple "ACTION" entries in Fig. 18, col. 13, line 65 to col. 14, line 9), displaying a confidence level associated with each recommended action in the first and second sets of recommended actions as a bar graph (Figs. 16 and 18, col. 13, lines 54-59 and col. 14, lines 2-4, and also col. 8, lines 10-15), and displaying a question and action detail window containing detailed information regarding at least one question and selected action in response to user selection of the question and action from the first and second sets of recommended actions (i.e., windows at bottom of Figs. 3-6, 15 and 17, col. 8, line 52 to col. 9, line 11).

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

7. Claims 5-8, 10, 18, 21-31, 33, 38-41 and 44 are rejected under 35 U.S.C. 103(a) as being unpatentable over Molloy (U.S. Patent No. 5,787,234) in view of Nguyen et al. (U.S. Patent No. 6,125,312).

With regard to claims 5, 6, 28 and 29, as noted previously, Molloy discloses many features of the claimed invention including displaying a status of each case as either "open" or "closed" (Fig. 5, col. 7, line 31). Molloy does not explicitly disclose displaying a status associated with each recommended action as either performed or not performed. Nguyen et al. discloses a maintenance control system that ensures all fault codes are responded to (i.e., that maintenance personnel carry out the appropriate maintenance actions in response to each and every fault code) and records maintenance actions in a maintenance action log (Fig. 1, item 20, col. 1, line 66 to col. 2, line 10). It would have been obvious to one of ordinary skill to modify Molloy to display a status associated with each recommended action as either performed or not performed, as suggested by Nguyen et al., because Nguyen et al. teaches that doing so

Art Unit: 2857

ensures that all fault codes are responded to with a view to improve quality assurance of maintenance (col. 1, line 66 to col. 2, line 5).

With regard to claims 7, 8, 18, 21-27, 30, 31, 38-41 and 44, as noted previously, Molloy discloses many features of the claimed invention, but does not disclose providing a link to information related to the work machine in an external source and displaying information in response to actuation of the link (a diagnostic advisor window/tool).

Nguyen et al. discloses providing a link to information related to the work machine in an external source and displaying information in response to actuation of the link (col. 1, lines 54-65). It would have been obvious to one of ordinary skill to modify Molloy to provide a link to information related to the work machine in an external source and display information in response to actuation of the link as disclosed by Nguyen et al., because Nguyen et al. teaches that doing so avoids duplication of information and the need for synchronization of the integrated system (i.e., linked system) (col. 1, lines 57-61 and col. 3, lines 27-54).

With regard to claims 10 and 33, as noted previously, Molloy discloses many features of the claimed invention, but does not disclose reading data values from the work machine. Nguyen et al. discloses reading data values from the work machine (col. 1, lines 50-54 and col. 2, lines 37-47). It would have been obvious to one of ordinary skill to modify Molloy to read data values from the work machine as disclosed by Nguyen et al., because Nguyen et al. teaches that doing so allows engine maintenance information to be generated automatically (col. 1, lines 50-54).

8. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Molloy (U.S. Patent No. 5,787,234) in view of Nixon et al. (U.S. Patent No. 4,841,441).

As noted previously, Molloy discloses many features of the claimed invention, but does not disclose identifying inconsistent answers provided by a user to two or more questions. Nixon et al. discloses an expert system that identifies inconsistent answers provided by a user to two or more questions (col. 21, lines 44-46). It would have been obvious to one of ordinary skill to modify Molloy to identify inconsistent answers provided by a user to two or more questions as disclosed by Nixon et al., because doing so ensures that answers subsequent to the first answer do not jeopardize the validity of the recommended actions that are based in part on the subsequent answers.

9. Claims 11-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Molloy (U.S. Patent No. 5,787,234) in view of Gilmour (U.S. Patent No. 6,205,472).

As noted previously, Molloy discloses many features of the claimed invention, but does not disclose displaying an alert link and dialog in response to actuation of the link by the user corresponding to at least one question and recommended action. Gilmour discloses displaying an alert link and dialog in response to actuation of the link by the user (i.e., link to an alert page; col. 29, lines 13-15) corresponding to at least one question (i.e., text of the original query; col. 29, lines 6-21). It would have been obvious to one of ordinary skill to modify Molloy to display an alert link and dialog in response to actuation of the link by the user corresponding to at least one question and recommended action, because an "alert" notification commands a higher importance over an informational message that does not have "alert" status, i.e., the users attention

can be gained more readily using an alert link in order to display messages of higher importance related to a question or recommended action.

10. Claims 19, 20, 42 and 43 are rejected under 35 U.S.C. 103(a) as being unpatentable over Molloy (U.S. Patent No. 5,787,234) in view of Nguyen et al. (U.S. Patent No. 6,125,312) and further in view of Hugh (U.S. Patent No. 6,166,736).

As noted previously, Molloy in combination with Nguyen et al. disclose many features of the claimed invention, but do not disclose providing a tabbed window pane having a plurality of tabs, and upon selection of one of the tabs, one of a plurality of panels is displayed in the tabbed panel corresponding to a diagnostic panel, a diagnostic code panel, and a functional test panel. Hugh discloses a tabbed window pane having a plurality of tabs, and upon selection of one of the tabs, one of a plurality of panels is displayed in the tabbed panel (Fig. 3 and col. 2, lines 18-21). It would have been obvious to one of ordinary skill to modify Molloy in combination with Nguyen et al. to provide a tabbed window pane having a plurality of tabs, and upon selection of one of the tabs, one of a plurality of panels is displayed in the tabbed panel, as taught by Hugh, because Hugh teaches that doing so allows a user to switch amongst multiple windows quickly (col. 2, lines 18-20). Further, although Hugh does not teach the specifics of assigning diagnostic, diagnostic code, and functional test panels to the tabs, it is the Examiner's position that the choice of assigning a diagnostic panel, a diagnostic code panel, and a functional test panel to the tabs disclosed by Hugh is a matter of obvious design choice once the use of tabs, as disclosed by Hugh, in the overall GUI design is set.

11. Claim 32 is rejected under 35 U.S.C. 103(a) as being unpatentable over Molloy (U.S. Patent No. 5,787,234) in view of Nguyen et al. (U.S. Patent No. 6,125,312) and further in view of Nixon et al. (U.S. Patent No. 4,841,441).

As noted previously, Molloy in combination with Nguyen et al. disclose many features of the claimed invention, but do not disclose identifying inconsistent answers provided by a user to two or more questions. Nixon et al. discloses an expert system that identifies inconsistent answers provided by a user to two or more questions (col. 21, lines 44-46). It would have been obvious to one of ordinary skill to modify Molloy in combination with Nguyen et al. to identify inconsistent answers provided by a user to two or more questions as disclosed by Nixon et al., because doing so ensures that answers subsequent to the first answer do not jeopardize the validity of the recommended actions that are based in part on the subsequent answers.

12. Claims 34-37 are rejected under 35 U.S.C. 103(a) as being unpatentable over Molloy (U.S. Patent No. 5,787,234) in view of Nguyen et al. (U.S. Patent No. 6,125,312) and further in view of Gilmour (U.S. Patent No. 6,205,472).

As noted previously, Molloy in combination with Nguyen et al. disclose many features of the claimed invention, but do not disclose displaying an alert link and dialog in response to actuation of the link by the user corresponding to at least one question and recommended action. Gilmour discloses displaying an alert link and dialog in response to actuation of the link by the user (i.e., link to an alert page; col. 29, lines 13-15) corresponding to at least one question (i.e., text of the original query; col. 29, lines 6-21). It would have been obvious to one of ordinary skill to modify Molloy in

combination with Nguyen et al. to display an alert link and dialog in response to actuation of the link by the user corresponding to at least one question and recommended action, because an "alert" notification commands a higher importance over an informational message that does not have "alert" status, i.e., the users attention can be gained more readily using an alert link in order to display messages of higher importance related to a question or recommended action.

Conclusion

13. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Brophy et al. (U.S. Patent No. 6,212,528) discloses a case-based reasoning system and method for scoring cases in a case database.

Chang (U.S. Patent No. 5,557,549) discloses a knowledge based diagnostic advisory system and method for troubleshooting an abnormal condition in the production of a product within an industrial plant facility.

Wakamoto et al. (U.S. Patent No. 5,107,500) discloses a diagnostic expert system for diagnosing a computer or data processing apparatus or a data processing apparatus used to control an object.

Carpenter et al. (U.S. Patent No. 6,260,048) discloses an incident resolution facility that receives a plurality of questions and generates a plurality of resolutions.

Oda et al. (U.S. Patent No. 5,127,005) discloses a fault diagnosis expert system for locating and eliminating sources of machine trouble.

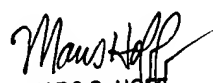
Borgida et al. (U.S. Patent No. 5,806,060) discloses an interactive data analysis information retrieval system employing a knowledge base that receives first queries and returns data in response thereto; and receives second queries specifying certain data and returns certain data in response to the certain data provided.

14. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Timothy R. Stampf whose telephone number is 703-305-3339. The examiner can normally be reached on Monday-Friday (8:00-5:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Marc S. Hoff can be reached on 703-308-1677. The fax phone numbers for the organization where this application or proceeding is assigned are 703-305-3431 for regular communications and 703-308-7725 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0956.

trs
June 4, 2002


MARC S. HOFF
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2800